Ryan ALM
Asset/Liability Management

RYAN ALM QUARTERLY

YTD'25 in Review

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Pension Performance Monitor (Total Returns %) – Year-To-Date 2025

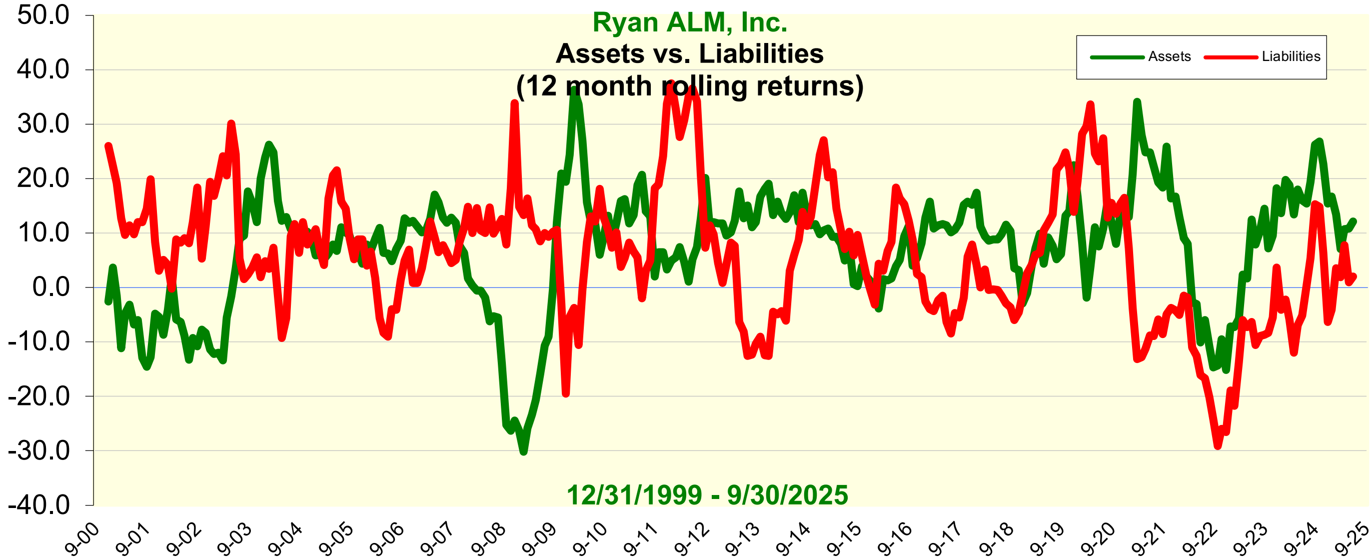
Pension Liabilities	YTD'25 (%)
Market (Treasury STRIPS)	6.4
ASC 715 (FAS 158)	7.3
PPA (MAP 21 = 3 Segments)	3.1
PPA (Spot Rates)	1.2
GASB /ASOP (7.0% ROA)	5.3

Pension Assets	
Cash (Ryan Cash Index)	3.4
Bloomberg Barclay Aggregate	6.1
S&P 500	14.8
MSCI EAFE International	25.8
Asset Allocation Model[1]	12.2

Pension Assets Minus Liabilities	
Market (Treasury STRIPS)	5.8
ASC 715 (FAS 158)	4.9
PPA (MAP 21 = 3 Segments)	9.1
PPA (Spot Rates)	11.0
GASB/ASOP (7.0% ROA)	6.9

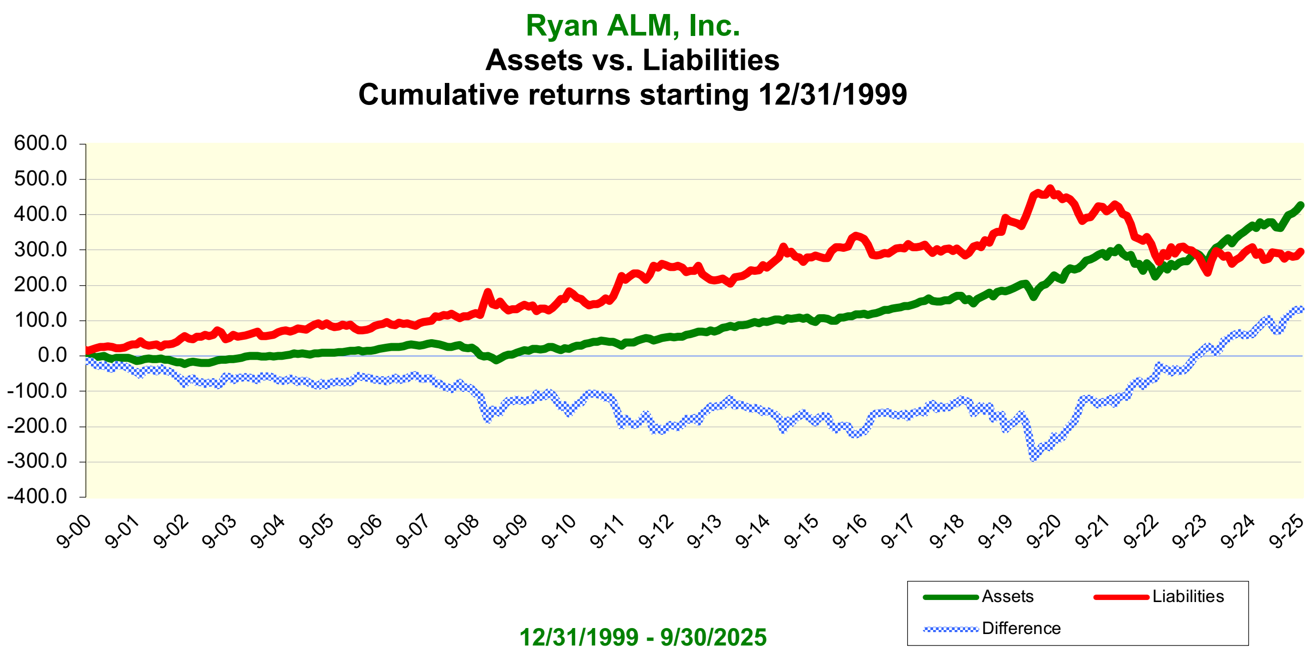
Based on the weights of the Ryan ALM Asset Allocation Model*, the difference in pension asset growth versus liability growth for YTD'25 reveals a positive comparison of pension assets minus pension liabilities no matter how pension liabilities are calculated. Corporate plans showed strong funding gains (5.8%) versus their liability benchmarks (ASC 715), while Public and Multiemployer plans using the ROA as the discount rate had marginally greater gains versus their liability growth rates 6.9% under GASB accounting). The startling rally in U.S. equities continued, while non-U.S. equities, as measured by the MSCI EAFE index continue their incredible reawakening (+25.8%). U.S. rates fell during the first nine months leading to gains for the BB Aggregate Index (6.1%).

* Model weights are: 5% Ryan Cash, 30% Bloomberg Barclay Aggregate, 60% S&P 500, and 5% MSCI EAFE International



US equities as measured by the S&P 500, are now up 14.8% through the first nine months of 2025. This result is surprising given the very challenging first quarter. Most of the outperformance is attributable to a broad-based rally in growth stocks, as the S&P Growth segment was up 19.5% vs. S&P Value at 9.7%. Small cap stocks were positive during the first 3/4s of 2025, but they lagged large cap stocks by 4.4%. Information Technology (22.3%) and Communication Services (24.5%) led the rally, while Consumer Staples (3.9%) and Healthcare stocks (2.6%) lagged.

US interest rates have ridden a rollercoaster so far in 2025, rising sharply to begin the year only to see rates begin to fall during March. The Federal Reserve has recently (September 17th) dropped the Fed Funds rate to 4.0%-4.25% down 0.75% during the last 52-weeks. However, uncertainty related to the current administration's policy decisions (i.e. tariffs) continues to weigh on the long-end of the Treasury curve leading to steepening of the yield curve (see page 5). The uncertainty surrounding the future path of interest rates should lead sponsors to seek an alternative to active fixed income. As a reminder, cash flow matching (CFM) eliminates interest rate risk as assets are used to defease liabilities that are future values, which are not interest rate sensitive.



Most pension funds enjoyed a funded ratio surplus in 1999, but pension asset growth had underperformed liability growth (based on the Ryan ALM Treasury STRIPS discount rate) fairly consistently for much of the next two decades. We are pleased to report that the funding deficit has been eliminated as a result of the Fed's tightening campaign, despite the recent Fed Fund's Rates cut of -0.75%, as rising interest rates reduce the present value of those future pension obligations. The cumulative difference is now 131.5% on a compound index basis starting at 100 on 12/31/99. The difference had been as much as -197.1% in 2020. Starting at a funded ratio of 100 on 12/31/99, the estimated funded ratio today would be 133.2%, which is based on the Ryan ALM liability calculations and our hypothetical asset allocation. It is trending in the same direction to the estimated funded ratio provide by Milliman in the Milliman 100 Pension Funding Index (PFI) which has recently been reported at 106.5%, which is the highest level since 2007.

US interest rates are not high relative to history, as I entered this industry in 1981 when the yield on the 10-year Treasury was roughly 15%, but they do provide the plan sponsor community with the opportunity to reduce the risk within their plans by defeasing a portion of the liabilities, such as the Retired Lives Liability (RLL). You'll read more on this in the "Latest Thinking Section", but the higher rates are creating an opportunity that hasn't been available in decades when US rates plummeted to historic lows in March 2020 (10-year Treasury yield was 0.32%). We encourage you to act today before this opportunity fades. Unfortuantely, a similar opportunity existed at the end of 1999, but that went unheeded.

Cumulative returns of assets versus liabilities (%)

	Assets	Liabilities	Difference	Cumulative Difference	Funded Ratio
2000	-2.5	26.0	-28.5	-28.5	77.4
2001	-5.4	3.1	-8.5	-37.6	71.0
2002	-11.4	19.5	-30.9	-73.4	52.7
2003	20	2.0	18.1	-60.1	62.0
2004	8.9	9.4	-0.4	-66.1	61.8
2005	4.4	8.9	-4.4	-76.8	59.2
2006	12.3	0.8	11.4	-64.6	66.0
2007	6.4	11.0	-4.6	-77.5	63.2
2008	-24.5	33.9	-58.4	-181.6	35.7
2009	15.7	-19.5	35.3	-106.9	52.9
2010	11.9	10.1	1.8	-115.7	53.8
2011	3.3	33.8	-30.5	-195.7	41.5
2012	11.8	4.5	7.3	-194.3	44.4
2013	19.0	-12.6	31.6	-120.7	60.5
2014	9.7	24.4	-14.6	-177.1	53.4
2015	1.2	-0.5	1.7	-172.8	54.3
2016	8.1	1.9	6.2	-163.4	57.6
2017	15.2	7.9	7.2	-160.3	60.9
2018	-3.0	-1.3	-1.7	-162.7	60.4
2019	22.8	13.9	8.9	-163.9	65.0
2020	14.4	16.5	-2.1	-197.1	63.8
2021	17.4	-4.2	21.6	-116.1	77.8
2022	-15.2	-26.6	11.4	-39.0	89.8
2023	18.3	3.7	14.6	9.9	102.5
2024	15.4	-6.4	21.8	97.9	126.3
YTD'25	12.2	6.4	5.8	131.5	133.2

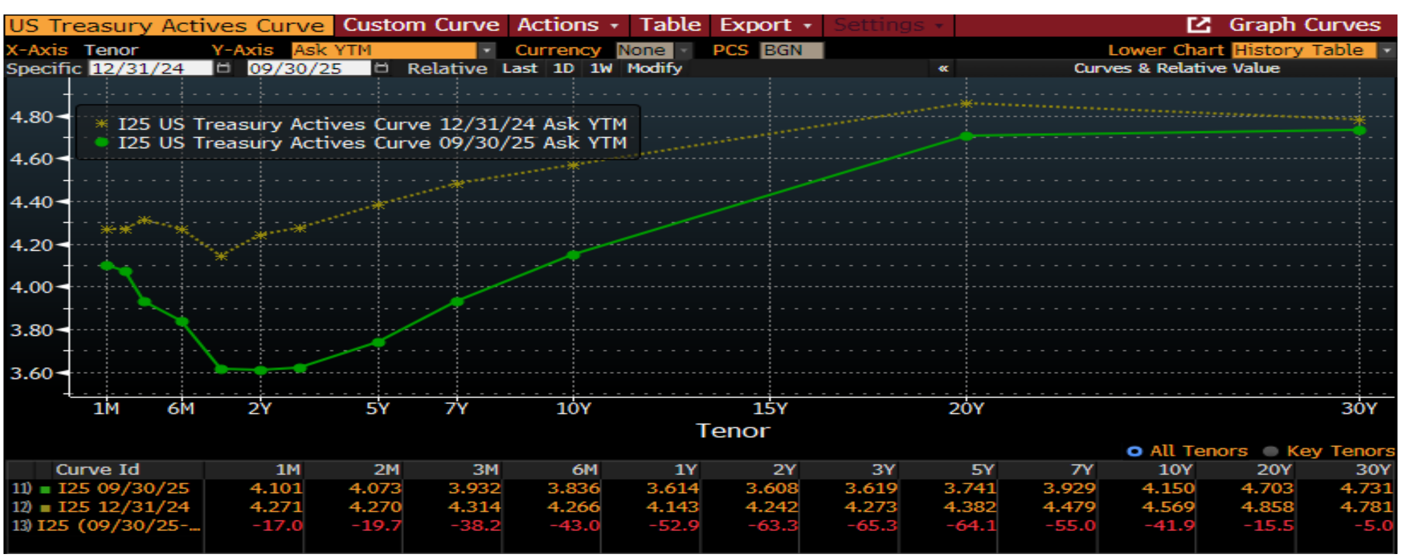
Source:Ryan ALM

Economic Snapshot as of September 30, 2025

	2024	Q3'25
U.S. GDP	2.8%	3.9%*
US Debt	$35.5 T	$37.4T
CPI - U	2.7%^	2.9%^
Unemployment Rate	4.2%	4.3%
30-Year Treasury Yield	4.79%	4.73%
10-Year Treasury Yield	4.58%	4.15%
2-Year Treasury Yield	4.25%	3.62%
3 Mo. T-Bills Yield	4.32%	3.95%
S&P 500	5,881.63	6,688.46
Nasdaq 100	19,310.79	22,660.01
R2000	2,230.16	2,436.48
Gold	2,639.30	3,888.00
Oil	$71.87	$66.15
Existing Single Family sales	3.88M	3.64M**

*GDPNow forecast as of September 26, 2025, ^annual # through August 31, 2025, ** as of July 31, 2025

Year-to-date change in the Treasury Yield Curve



Sharing Perspective at RyanALM.com/white-papers or Ryanalm.com/Blog

Earn the ROA… and Contributions Go UP?

The return on assets (ROA) assumption is not based on the funded ratio or funded status. Instead, it is based on the expected return from the asset allocation model. As a result, the ROA is not a calculated return that will guarantee a fully funded status if achieved as a long-term return…

You Can't Manage What You Don't Measure!

Nearly 10 years ago, before joining Ryan ALM, I wrote an article about the idea that plan sponsors need to focus on their fund's liabilities, as much as, if not more than, their plan's assets. It shouldn't be a shocking statement since the only reason that the plan exists is to fund a promise…

Dear Plan Sponsor: Please Ask Yourself the Following Questions

Do you believe that your pension plan exists to meet (secure) a promise (benefit) that was given to the plan's participants? Are you factoring in that benefit promise when it comes to asset allocation? Do you presently have exposure to core fixed income, and do you know where U.S. interest rates will be in the next day, month, year, 5-years?

A Peer Group?

Got an email today that got my heart rate up a little. The gist of the article was related to a particular public pension fund that eclipsed its "benchmark" return for the fiscal year ended June 30, 2025. Good job!

I'm Concerned! Are You?

I've been concerned about the U.S. retirement industry for many years, with a particular focus on traditional pensions. The demise of DB pensions is a major social and economic issue for a significant majority of American workers, who fear that their golden years will be greatly tarnished…

Confusing the Purpose

There recently appeared in my inbox an article from an investment advisory firm discussing Cash Flow Driven Investing (CDI). Given that CDI, or as we call it Cash Flow Matching (CFM), is our only investment strategy, I absorb as much info from "competitors" as I can.

Latest Thinking

We continue to be thrilled that the American Rescue Plan Act (ARPA) was passed as part of the $1.9 trillion stimulus package. This legislation has many of the elements of the Butch Lewis Act which Ryan ALM's Ron Ryan was instrumental in providing the defeasance language. As a reminder, any Special Financial Assistance (SFA) received must be kept separate and managed conservatively (at least 66.7% in bonds) to ensure that the funds received and earmarked to pay the promised benefits (through 2051) are actually available. The PBGC has approved the SFA applications for 139 multiemployer plans through September 30, 2025, totaling $74.1 billion (including supplemental filings and interest) in government grants.

The first three quarters of 2025 have continued to be very good for Ryan ALM, Inc. as we strive to protect and preserve the promised benefits for as many DB pension plans as possible. Following 2024, in which we more than doubled the number of full discretion CFM clients that we are fortunate to support, we've just been funded with our largest full-discretion account to date. The nearly $740 million CFM portfolio covers a slice of this plan's liabilities out to 30-years. We thank you for your continued trust. Please don't hesitate to reach out to us if you'd like a **FREE** analysis to learn more about what we can do for **YOUR DB** pension plan.

We are very committed to educating plan sponsors and their advisors about the positive impact of the current interest rate environment and the impact higher rates have on the ability to de-risk DB pensions through Cash Flow Matching (CFM). The US Federal Reserve's most recent action on Interest rates (-1.25% since the initial cut on 9/17/24) has reduced the Fed Fund's Rate to 4.00%-4.25%, but market participants remain concerned about the economy's current and prospective level of inflation. As such, US interest rates remain at levels supportive of de-risking and they might rise from here, although we don't forecast rates at Ryan ALM, Inc. The below info is for a representative client, as of August 31, 2025. The rate environment provides an incredible opportunity to secure the promises at low cost!

LBP Summary

	ASC 715	LBP Model	Cost Savings ($ and %) *	
Future Value	$115,734,177	$115,734,177		
Present Value	$81,497,294	$80,251,232	$35,482,945	30.66%
YTM	4.59%	4.86%		
MDuration	5.97	6.61		
LBP Model Efficiency		119.00%		
Total Assets		$91,205,983		

Ryan ALM's mission is to solve liability driven problems through low cost, low risk unique solutions.

About Ryan ALM, Inc.

Ryan ALM was founded by Ronald J. Ryan, CFA on June 15, 2004 (happy 21st anniversary to us!) as an Asset/Liability Management firm. The firm has built a turnkey system of proprietary synergistic products designed to measure liabilities as a Custom Liability Index (CLI) and manage assets to the CLI as Liability Beta Portfolios.

Ryan ALM is unique in having its own proprietary Index company named ALM Research Solutions, LLC. This company builds both custom and generic bond indexes. Such indexes range from Custom Liability Indexes to ETF Indexes.

Our Liability Beta Portfolio™ is our proprietary cost optimization model that "cash flow matches" clients projected liability benefit payment schedules at a low cost using investment grade bonds. In this higher interest rate environment, our portfolios are producing cost savings of >2%/year. Our LBP best represents the core portfolio (or liquidity bucket) of a pension plan or endowment/foundation.

FASB requires corporations and nonprofit organizations to price their liabilities at certain discount rates. Importantly, Ryan ALM provides these discount rates in conformity to ASC 715: Pensions. For more info: Read here

Our team has been recognized for our expertise and results including Ron Ryan having won the William F. Sharpe Index Lifetime Achievement Award.

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